

25 JAN 1983

AR 00910

MAJOR FEDERAL FACILITIES OUT OF COMPLIANCE

OR HAVING POTENTIAL HAZARDOUS WASTE

DISPOSAL PROBLEMS

REGION 6

The following report has been prepared to provide a brief summary of what are considered to be the most significant compliance problems at major Federal facilities in Region 6. The problems described are multi-media in that they include actual or potential problems in each of the three environmental media of AIR (SIP compliance), WATER (NPDES compliance) and HAZARDOUS WASTE (RCRA/CERCLA compliance). The individual facilities are listed in an approximate order of priority determined by the apparent magnitude of the facility's total contribution to pollution of the local environment, and the order was subject to the judgment of the writer as to relative magnitude between the media.

1. KELLY AIR FORCE BASE, TEXAS

Problem Media - Water and Hazardous Waste

a. Water problems - KAFB violated NPDES permit conditions by spreading dried sludge containing heavy metals from their IWTP on the ground in an area that drains directly into a nearby stream. We called the violation to their attention and they began hauling the sludge to an approved chemical landfill and discontinued the spreading practice. Texas Department of Water Resources (TDWR) soil sample testing results indicate elevated levels of several heavy metals in the spreading area, but TDWR ran no leaching tests to see if runoff water is likely to carry the metals into the stream. KAFB tested one sample of runoff water and no detectable amounts of the metals were reported. TDWR hasn't yet decided whether to press for removal or containment of the sludge.

KAFB continues to have a problem with violations of the cadmium limit in their NPDES permit. Multiple excursions above the daily limit have been reported for 17 of the 18 months ending in November 1982. KAFB reports they have not yet found a specific cadmium source responsible for the problem. They report they have made increased management emphasis on controlled discharges into the waste stream.

The TDWR also accused KAFB of causing a major fish kill in Leon Creek between September 28 and October 5, 1981, the incident apparently resulting from KAFB chemical drum washing procedures. EPA arranged a joint KAFB, TDWR and EPA meeting in December 1981, to discuss the fish kill incident and other problems at KAFB which cast doubts on the effectiveness of pollution controls within the Base activities. KAFB described steps being taken and proposed to correct their problems and promised reports on status of the corrections. Since that meeting they have developed a chemical and waste handling regulation for Base

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Pine Bluff Arsenal

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tenants, completed a study of IWTP needs and started design on plant improvements to provide BAT. Texas also notified KAFB of their intent to litigate the fish kill incident and violations of KAFB's State wastewater discharge permit. We have informed KAFB and the State that EPA will not interfere in the proposed action.

b. Hazardous Waste Problem - During an on-site visit to KAFB in August 1980, we noted the potential for contaminant migration from the industrial waste sludge drying pond, an old industrial waste pit adjacent to a former plating shop near Leon Creek, and an abandoned landfill under a part of the Base golf course adjacent to the Creek. In response to our request for additional information on the matter we finally received, in August 1982, an Air Force report on initial investigations into past hazardous waste disposal practices at KAFB. It indicates that these 3 sites are not the only inactive sites with hazardous waste pollution potential and identifies at least 16 sites with moderate to high potential for contaminant migration into surface or ground waters. These include six former landfills, three chemical or oil disposal pits, three sludge spreading areas, three spill areas and a used chemical storage area. The report recommends additional physical investigations at these sites to determine if there is contaminant migration and what corrective measures may be necessary, but no additional word has been received from KAFB or the Air Force about the status or schedule of the follow-up investigations.

Texas is also considering legal action against KAFB for violation of RCRA and the Texas Solid Waste Act by failing to list all facilities used to store hazardous wastes in their "Part A" application for an interim status permit. The facilities not listed are part of the old domestic waste treatment plant and a waste "oil" pit.

2. TINKER AIR FORCE BASE, OKLAHOMA

OK03646

Problem Media-Water and Hazardous Waste

a. Water problem - TAFB (1) has been violating their major industrial permit ever since it was issued in November of 1974, (2) is nearly six years past the statutory deadline for achieving BPT, and (3) has not yet fully achieved BPT. We have met and corresponded with TAFB and other Air Force representatives to discuss the TAFB needs and corrective measures and to try to accelerate accomplishment of needed improvements and compliance achievement. We are also negotiating a Federal Facility Compliance Agreement with TAFB which calls for achievement of compliance by May 1984, with limitations included in a new permit about to be issued. A major improvement project began construction in March 1982 on additional capability designed to ultimately provide "BAT equivalent" treatment. The Base also implemented some in-house process and operations changes which have resulted in a marked improvement shown in recent DMRs submitted by TAFB. In July 1980 the TAFB plant was out of compliance on a total of six pollutants. As of the end of September 1982, the plant is consistently showing compliance with the limits for all but two pollutants monitored (hexavalent chromium and phenols). The magnitudes of the excursions for these two have also been reduced significantly.

b. Hazardous waste problem - We have received an Air Force report on initial investigations into past hazardous waste disposal practices which indicates that TAFB has several disposal sites with moderate to high potential for migration of contaminants into surface or ground waters. Five former landfills and two abandoned industrial waste pits are included among these sites. The Base has done some ground water monitoring with test wells at one of the landfills, which reportedly indicates no measurable contaminant migration. The Air Force report recommends additional physical investigations at the questionable sites to determine the existence and magnitude of contaminant migration and required corrective measures. No information has been received yet from TAFB or the Air Force about the status or schedule of the follow-up investigations.

3. PINE BLUFF ARSENAL, ARKANSAS

Problem Media - Hazardous Waste

Problem description - Army investigations of past activities and disposal practices at PBA have identified 29 sites on the reservation where various hazardous materials have been dumped or buried through the years and a former war gas production area where the buildings remain contaminated with the production chemical residues. One of the dump sites is in the former chemical manufacturing area, which is the proposed site for a future plant to produce one of the components of a binary nerve agent. PBA included projects in the Army's FY 1983 pollution control budget to remove and/or contain and close in place, as appropriate, the hazardous waste at this site and for the demolition and removal of the contaminated buildings. The Army's 1984 budget will contain a similar project or projects for the other 28 identified sites. EPA and State representatives have met with PBA, Corps of Engineers and Army contractors to (1) review plans for a landfill to receive soil and debris from the binary site and future production wastes, and (2) to provide guidance for a RCRA permit application for the landfill. PBA submitted a RCRA interim status application for hazardous waste disposal, which includes the problem sites as well as the new landfill and other disposal activities to be continued. A Part B application for a RCRA permit was also submitted to EPA in October 1982, and closure and post-closure plans for all the sites are to follow. A recent EPA RCRA inspection identified 6 sites which are definite hazards and 17 sites potentially hazardous to surface or ground water. These include the same sites identified by the Army and programmed for correction.

4. FORT POLK, LOUISIANA

Problem Media - Water

Problem description - The South Fort Polk Sewage Treatment Plant, which serves the Main Post of the installation, has been unable to operate within its NPDES permit limitations almost from the time the permit became effective in November 1974. A part of the problem is that Fort Polk's mission was expanded after the permit was issued, and the sewered population and sewage volume outgrew the treatment facilities. With two major expansions since then, the plant presently has theoretical design capability to provide

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secondary level treatment for the current sewage load and to meet all the limits of the current permit, except for the flow and total parametric loadings, which do not reflect current loading conditions. However, certain deficiencies in plant additions design and equipment prevented the expanded plant from achieving its design capabilities and producing the effluent quality specified in the permit. We issued an Administrative Order for corrective actions and Fort Polk responded with a plan outlining two correction projects which are nearly completed. Recent DMRs indicate that additional corrections may be needed to meet the permit conditions, and we have asked Fort Polk for an update on corrective steps currently underway.

Fort Polk's ultimate sewage disposal plan is to land treat the total S.T.P. discharge and eliminate effluent discharge to Bundicks Creek. In what was supposed to be the final phase of their plan, they constructed a group of "rapid infiltration" basins in another drainage area to provide land disposal of the S.T.P. effluent. These basins were put into operation for three weeks during June 1981, and observed infiltration rates were considerably less than their design capacity. Basins operation was suspended pending further field investigations by the Corps of Engineers to see if they could be made to function as originally intended. They concluded that the system, as constructed, has only about 36 percent of the required 3.8 MGD capacity. After considering possible alternative disposal plans, the Army has proposed to utilize the basins as holding or polishing ponds for the S.T.P. effluent and provide land treatment by overland flow of ponds effluent through heavily vegetated drainage swales or "baygalls" leading to Drake's Creek. EPA and State representatives met with the Army at Fort Polk in May 1982, to discuss the proposal and observe the basins and one of the baygalls to be utilized. Fort Polk has since submitted a formal written proposal covering the plan and a request for a short-term permit to implement it for an 18 months trial period, during which time they will conduct a special monitoring program to establish a relationship between effluent quality in the S.T.P. and ponds effluent and D.O. and nutrients in Drake's Creek. We and the State agreed to give them a short-term permit for the trial period, and that permit should go to public notice shortly.

In connection with the same permit, Fort Polk is still experiencing breaks in a new sewage force main which was the subject of a previous Administrative Order we closed out. The main recently broke for the ninth time in a period of 30 months, and it appears positive correction may require replacement of the main or at least a large portion of it. The Army Construction Engineering Research Laboratory has been testing samples of the pipe to determine if the problem may be due to faulty material. We have not been informed of their findings. The Army has also installed slow acting check valves in the main to relieve pressure surges, but it's too early to tell if they will correct the problem.

5. LOUISIANA ARMY AMMUNITION PLANT, LOUISIANA

Problem Media - Hazardous Waste

LAC 19-59

Problem description - Shallow underground water contamination is resulting from LAAP's past and recent practices of disposing of hazardous

industrial wastes. Initial Army investigations in 1979, including analysis of water taken from a series of 30 test wells, showed evidence that 17 unlined wastewater ponds containing wastes from ammunition production (16 TNT "pink water" ponds), metal finishing/cleaning and paint stripping operations and two inactive landfills on-site are leaching contaminants such as hydrogen sulfide, TNT, DNT, RDX, Tetryl and lead into the shallow water aquifer under the Plant site. The Army reported their findings in a May 1980 meeting with interested Federal and State agencies and outlined plans for additional investigations to determine the extent of migration of the contaminants and the potential threat to private water supply wells also utilizing the shallow aquifer. Eighteen additional wells were drilled and tested to determine contaminant migration beyond the LAAP boundary, and the reported results were negative. An additional 33 wells were drilled to identify the extent of the migration on-post and whether it is continuing. A draft report of the findings and recommendations for corrective measures was received in August 1982 by LAAP. The final report has not yet been released.

EPA's Solid and Hazardous Waste Research Division (SHWRD) at the Cincinnati MERL is presently working with the Army at LAAP on a remedial action research effort designed to demonstrate the effectiveness of a sludge treatment technique on the closure of one of the LAAP industrial waste ponds which could be applied to other similar lagoons and ponds. The demonstration project will be conducted under controlled operational conditions on the M-4 Lagoon (wastewater and sludge from a former cadmium electroplating operation) and will be designed to integrate with remedial and ponds closure work at LAAP's TNT pink water ponds and other Army research at similar lagoons elsewhere. The M-4 Lagoon closure-demonstration project is being closely coordinated by SHWRD and LAAP with the Louisiana DNR and EPA regional offices.

6. LONGHORN ARMY AMMUNITION PLANT, TEXAS

Problem Media - Hazardous Waste

Problem description - LAAP has three potential problem hazardous waste sites. One is a 23-acre former manufacturing area where TNT was manufactured during WWII and where the soil may be contaminated by "red water" residue subject to being carried by rainwater runoff or percolation into surface or ground waters. The other potential problem sites are (1) an unlined evaporation pond receiving washdown water from propellant loading operations and (2) an abandoned landfill in which wastes from the former TNT plant were buried. The Army installed 22 monitoring wells around the latter two sites, and subsequent monitoring indicated a contaminant migration problem at the evaporation pond and a potential nitrate migration problem at the landfill. Additional samples were taken at the landfill, but information on the results hasn't been received yet by EPA. Current plans are to install a treatment plant for the propellant loading area waste water and close the pond. A study to characterize waste quality and volume going to the pond is under way, and the study results are to be used to determine future waste treatment processes and a method of closure for the pond. A study report is expected in mid-1983. Plans for the new treatment facilities will follow that report. At the TNT area, the Army is currently in the second, or monitoring, phase of its Installation Restoration Program (IRP) investigations,

and the Phase II report recommending corrective measures is expected some time in June 1983. This report will also include recommendations for the abandoned landfill.

LAAP is also one of the potential sources of contaminants (PCBs, lead, cadmium, etc.) found recently in Caddo Lake during investigations conducted in connection with Section 404 dredging permit applications to the Corps of Engineers. As a result, EPA has notified the Army of our special interest in the results of their hazardous waste disposal investigations at LAAP. They have promised to expedite our receipt of their monitoring results to aid in the Caddo Lake study.

7. AIR FORCE PLANT NO. 83, NEW MEXICO

Problem Media - Hazardous Waste

Problem description - Recent EPA inspections at this Plant (AFP) have identified several problems with storage and handling of chemical waste materials. These problems have resulted in the discharge of hazardous wastes into surface drainage going into the San Jose Drain to the Rio Grande River, and there is a strong possibility they may also be contributing to contamination of an underground water supply source for the City of Albuquerque. The city's San Jose Well No. 6, and a nearby industrial water well, both located within a half mile of the AFP, were found to be contaminated with several suspected carcinogenic chemicals, including trichloroethylene and dichloroethylene. These solvents are, or have been, used in the AFP processes. State data from the S. Valley investigations indicates the AFP is a potential contributor to the ground water contamination. EPA and State met in November 1982 with potential contributors to discuss response actions necessary to confirm individual site involvement and correct any identified problems. Air Force attended that meeting, but provided no information about any investigations into potential AFP ground water contamination.

Our August 1982 A-106 report to OMB included a recommendation that the Air Force initiate a subsurface monitoring investigation to determine whether there is any apparent migration from the Plant to the ground water. We also recently sent the Air Force a letter requesting information on any such investigations and/or corrective actions. A response is anticipated in mid-February. The AFP hasn't yet demonstrated compliance with their RCRA Administrative Order, and it is still open. It cites deficiencies in hazardous wastes handling and storage.

8. McALESTER ARMY AMMUNITION PLANT, OKLAHOMA

Problem Media - Hazardous Waste

OK01191

Problem description - This plant has 10 lagoons receiving industrial wastes from their ammunition production facilities. There is a possibility that various contaminants, including TNT and heavy metals, may be migrating from these lagoons through the soil into ground or surface waters. In cooperation with the State of Oklahoma, the Army installed 11 test wells around the lagoons and has been analyzing samples for about a year. Results of

analyses indicate some migration, but monitoring wells arrangement does not allow for identification of problem ponds. Army sent a geologist to MAAP in September 1982 to evaluate the monitoring program and recommend improvements needed to determine where migrations are originating and corrections are needed. His evaluation report calls for additional wells and testing before a definite determination can be made. These ponds are all active disposal ponds subject to RCRA permitting and regulation rather than to CERCLA or Superfund cleanup procedures.

9. KIRTLAND AIR FORCE BASE, NEW MEXICO

Problem Media - Hazardous Waste

Problem description - Air Force initial investigations into past hazardous waste disposal practices and waste disposal sites at KAFB indicate KAFB has six inactive sites with moderate to high potential for contaminant migration into surface or ground waters. These include four former landfills, a radioactive waste burial site and the main Base Fire Training Area. The investigation report recommends additional soil and leachate investigations at each site to determine the existence and magnitude of contaminant migration and necessary corrective measures. Neither KAFB nor the Air Force has sent us any information about the status or schedule of any follow-up investigations. State investigations to date into Albuquerque's S. Valley ground water pollution problems indicate that KAFB is not likely to be contributing to that problem.

10. RED RIVER ARMY DEPOT, TEXAS

Problem Media - Hazardous Waste

Tx 03916

Problem description - Initial results from RRAD's ground water monitoring system, installed in response to RCRA regulations, indicate apparent migration of contaminants from two areas of the installation where hazardous wastes are or were being deposited. The OTC (Ordnance Training Center) area contains three former burial sites, and the IWTP (Industrial Waste Treatment Plant) area contains two active industrial waste treatment ponds. RRAD met with Texas RCRA program representatives in Austin in June 1982, and presented their monitoring results in an Army Groundwater Assessment report, which included recommendations for corrective measures, if deemed necessary. This meeting resulted in a mutual decision to postpone corrective measures and install additional monitoring wells to confirm whether corrective measures are necessary. RRAD is to keep Texas and EPA advised of future monitoring results and possible correction plans.

11. McGREGOR NAVAL INDUSTRIAL WEAPONS PLANT, TEXAS

Problem Media - Hazardous Waste

Problem description - Recent Navy investigations into past hazardous waste disposal practices at the McGregor plant have identified two potential problem sites which require further investigation to determine the extent of

the problems and appropriate corrective measures. The two sites are inactive and involve deposits of asbestos and DDT. The latter deposits were left by a private firm formerly leasing a part of the plant's production facilities to produce DDT. The Navy presented preliminary plans for proposed corrective action to State and EPA regional Superfund program representatives in a meeting at the Plant on September 22, 1982. State and EPA concurrence was given, and the Navy has been finalizing the closure plans. Site work is expected to begin by May 1983 and be completed about September 1983.

12. LONE STAR ARMY AMMUNITION PLANT, TEXAS

Problem Media - Hazardous Waste

TX 0 1886

Problem description - Industrial wastewaters and sludges from past munitions manufacturing activities were disposed of in numerous pits and lagoons in production areas G, O, P, and Q. The pits and lagoons were all unlined and subject to overflowing and/or possible leaching of contaminants into surface or ground waters. Contaminants include TNT, RDX, lead and other heavy metals. Army field investigations indicated that subsurface soil surrounding the various disposal pits and lagoons is tight enough to prevent migration of contaminants through the soil to ground or surface waters. LSAAP initiated a program to contain and close all the lagoons and pits in place by dewatering, backfilling, and/or covering with an impervious soil cap. Closure work is complete on Areas O, P & Q. Closure work on Area G ponds began after the new treatment facility became operable in October 1982. However, wet weather stopped the work in November 1982 and has prevented its continuation since. LSAAP now estimates project completion will be delayed until June 1983. Area G wastewaters are now being treated in the new treatment facility.

The Army advises that all the lagoons and pits will be registered as hazardous waste disposal sites to prevent future use and will be monitored by a system of test wells for any possible horizontal or vertical migration of the enclosed contaminants through the soil. LSAAP has applied for interim status as a disposer under RCRA to cover the interim before the closure work is completed.

13. LOS ALAMOS NATIONAL LABORATORY, NEW MEXICO

Problem Media - Water

NM 00 1883

Problem description - LANL has a single NPDES permit covering a total of 116 industrial and domestic waste discharges, most of which are minor low pollution potential discharges. Recent monitoring data received from LANL indicate all but seven of the covered discharges are generally complying with the permit limitations. Information gathered in a September 1982 EPA visit to LANL indicates some of the planned correction projects were delayed for lack of funding, and the uncertainty of future funds made DOE reluctant to conclude an EPA-proposed Compliance Agreement until EPA changed some of the inflexible language. A new compliance schedule was furnished which calls for all but one of the violating discharges to achieve compliance by September 1984. The remaining discharge is scheduled to achieve compliance in September 1985. The Agreement was revised to change the unsuitable language and incorporate the new schedule, and it has been signed by EPA and forwarded to DOE for signature.

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